

Appl. No. 09/997,021
Amdt. Under 37 CFR § 1.116
March 31, 2004

AMENDMENT TO THE CLAIMS

The listing of claims below replaces all prior versions, and listings, of claims:

1 1. (Canceled)

1 2. (Currently Amended) The system of claim ~~[[1]]~~ 82, wherein the portable user
2 interface device comprises a display to display a graphical user interface.

1 3. (Original) The system of claim 2, wherein the graphical user interface comprises
2 one or more graphical elements selectable to control the tool.

1 4. (Currently Amended) The system of claim ~~[[1]]~~ 82, wherein the portable user
2 interface device comprises a personal digital assistant.

1 5. (Currently Amended) The system of claim ~~[[1]]~~ 3, wherein the portable user
2 interface device comprises an infrared transceiver adapted to communicate infrared signals.

1 6. (Cancelled)

1 7. (Currently Amended) The system of claim ~~6~~ 82, wherein the user interface device
2 comprises a display to show a result of the test.

1 8. (Currently Amended) The system of claim ~~6~~ 82, wherein the tool comprises plural
2 control units, the user interface device adapted to send commands to the tool to successively test
3 the plural control units.

1 9. (Previously Presented) The system of claim 8, wherein the tool comprises a string
2 of elements, and the control module is coupled to the string of elements.

1 10. - 28. (Canceled)

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1 29. (Currently Amended) The method of claim ~~28~~ 79, further comprising accepting
2 user selection of an item in a graphical user interface of the portable user interface device to
3 perform a task associated with the tool.

1 30. (Original) The method of claim 29, further comprising displaying a status of the
2 tool in the graphical user interface.

1 31. (Original) The method of claim 30, wherein displaying the status comprises
2 displaying status of plural devices in the tool.

1 32. (Original) The method of claim 30, wherein displaying the status comprises
2 displaying a status of control units for explosive devices.

1 33. (Currently Amended) The method of claim ~~28~~ 79, further comprising
2 sending a command to the tool to test the tool.

1 34. (Cancelled)

1 35. (Currently Amended) The method of claim ~~34~~ 79, wherein receiving the
2 identifiers comprises scanning bar codes of the components.

1 36. (Original) The method of claim 35, wherein scanning the bar codes comprises
2 using a scanner module coupled to the user interface device.

1 37. (Original) The method of claim 35, wherein the components comprises control
2 units, the method further comprising assigning the bar codes as addresses of the control units.

1 38. (Original) The method of claim 34, wherein receiving the identifiers comprises
2 receiving the identifiers using a radio frequency transceiver.

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1 39. (Currently Amended) The method of claim 28 79, further comprising
2 encapsulating the user interface device in a cover adapted to reduce discharge of an electrical
3 impulse.

1 40. (Currently Amended) The method of claim 28 79, further comprising providing a
2 security feature in the user interface device to prevent unauthorized access of the user interface
3 device, the security feature comprising one of a field to accept a password and a component to
4 interact with a smart card.

1 41. (Currently Amended) ~~The method of claim 28, further comprising~~ A method
2 comprising:
3 providing a portable user interface device;
4 wirelessly communicating with a control module using the portable user interface
5 device;
6 the control module communicating with a tool,
7 the tool selected from the group consisting of a well tool and a tool containing one
8 or more explosive elements; and
9 storing information relating to a distance between a casing collar locator and one
10 or more shots of the tool.

1 42. - 61. (Canceled)

1 62. (Currently Amended) The system of claim ~~[[1]]~~ 82, wherein the portable user
2 interface device comprises a graphical user interface having one or more control elements
3 selectable to activate testing of the tool.

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1 63. (Previously Presented) The system of claim 62, wherein the tool comprises plural
2 control units, the portable user interface device adapted to send commands to sequentially test
3 the plural control units.

1 64. (Previously Presented) The system of claim 63, wherein the graphical user
2 interface is adapted to display acquired information pertaining to each of the control units.

1 65. (Previously Presented) The system of claim 62, wherein the graphical user
2 interface is adapted to display information pertaining to control units for explosive devices.

1 66. (Currently Amended) ~~The system of claim 1~~ A system, comprising:
2 a portable user interface device;
3 a control module; and
4 a tool selected from the group consisting of a well tool and a tool containing one
5 or more explosive elements, the tool coupled to the control module,
6 the portable user interface device adapted to communicate wirelessly with the
7 control module,
8 wherein the control module comprises a current limiting device adapted to limit
9 an amount of current delivered to the tool to allow safe use with explosive devices in the tool.

1 67. (Previously Presented) The system of claim 66, wherein the control module
2 further comprises a second, redundant current limiting device.

1 68. (Previously Presented) The system of claim 66, wherein the control module
2 further comprises a switch to couple output current from the current limiting device to the tool.

1 69. (Previously Presented) The system of claim 68, wherein the control module is
2 adapted to check for a current level to be below a predefined limit before closing the switch.

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1 70. (Previously Presented) The system of claim 66, wherein the control module
2 further comprises a fuse placed in a current path to the tool.

1 71. (Currently Amended) ~~The system of claim 1~~ A system, comprising:
2 a portable user interface device;
3 a control module; and
4 a tool selected from the group consisting of a well tool and a tool containing one
5 or more explosive elements, the tool coupled to the control module,
6 the portable user interface device adapted to communicate wirelessly with the
7 control module,
8 wherein the control module further comprises a current detector to detect current
9 from the tool, the control module adapted to use an output of the current detector to determine
10 for presence of components in the tool.

1 72. (Previously Presented) The system of claim 71, wherein the control module is
2 adapted to further use the output of the current detector to determine if a component of the tool
3 has failed.

1 73. (Currently Amended) ~~The system of claim 1~~ A system, comprising:
2 a portable user interface device;
3 a control module; and
4 a tool selected from the group consisting of a well tool and a tool containing one
5 or more explosive elements, the tool coupled to the control module,
6 the portable user interface device adapted to communicate wirelessly with the
7 control module,
8 wherein the control module further comprises a current detector to detect current
9 from the tool, the control module adapted to use an output of the current detector to determine if
10 a component in the tool has failed.

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1 74. (Currently Amended) The system of claim ~~[[1]]~~ 82, wherein the portable user
2 interface device is adapted to check that communications with components of the tool is
3 functional.

1 75. (Previously Presented) The system of claim 74, wherein the portable user
2 interface device is adapted to verify addresses of the components in the tool.

1 76. - 77. (Cancelled)

1 78. (Currently Amended) The method of claim ~~77~~ 79, wherein receiving the
2 identifiers comprises using a scanner module to receive the identifiers.

1 79. (Currently Amended) ~~The method of claim 77~~ A method comprising:
2 providing a portable user interface device;
3 wirelessly communicating with a control module using the portable user interface
4 device;
5 the control module communicating with a tool;
6 the tool selected from the group consisting of a well tool and a tool containing one
7 or more explosive elements;
8 receiving, in the portable user interface device, identifiers of inventory
9 components for use in the tool;
10 storing information pertaining to the inventory components; and
11 updating the information based on usage,
12 wherein receiving the identifiers comprises receiving identifiers of components of
13 an explosive tool.

1 80. (Previously Presented) The method of claim 79, wherein receiving the identifiers
2 comprises receiving identifiers of control units and switches.

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1 81. (Cancelled)

1 82. (Currently Amended) ~~The system of claim 81~~ A system, comprising:
2 a portable user interface device;
3 a control module; and
4 a tool selected from the group consisting of a well tool and a tool containing one
5 or more explosive elements, the tool coupled to the control module,
6 the portable user interface device adapted to communicate wirelessly with the
7 control module,
8 wherein the control module is adapted to send a command to the tool to perform a
9 test of the tool,
10 wherein the control module is responsive to wireless signals from the portable
11 user interface device to send coded signals to the tool for testing the tool, the control module
12 comprising a detector adapted to detect a status of one or more components of the tool,
13 wherein the detector comprises a current detector adapted to detect a level of
14 electrical current.

1 83. (Currently Amended) ~~The system of claim 81~~ A system, comprising:
2 a portable user interface device;
3 a control module; and
4 a tool selected from the group consisting of a well tool and a tool containing one
5 or more explosive elements, the tool coupled to the control module,
6 the portable user interface device adapted to communicate wirelessly with the
7 control module,

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8 wherein the control module is adapted to send a command to the tool to perform a
9 test of the tool,

10 wherein the control module is responsive to wireless signals from the portable
11 user interface device to send coded signals to the tool for testing the tool, the control module
12 comprising a detector adapted to detect a status of one or more components of the tool,

13 wherein the detector is adapted to detect for at least one of the following failures:
14 mis-wiring of a components in the tool; a short in the tool; and the presence of a detonator in the
15 tool.